

Name _____ Class _____ Date _____

12-2

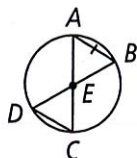
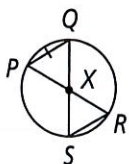
Practice

Form G

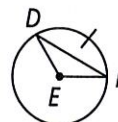
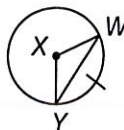
Chords and Arcs

In Exercises 1 and 2, the $\odot X \cong \odot E$. What can you conclude?

1.

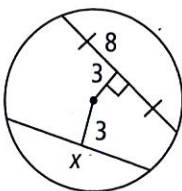


2.

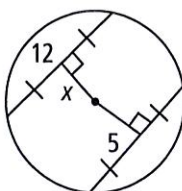


Find the value of x .

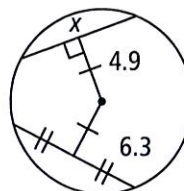
3.



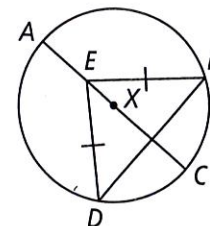
4.



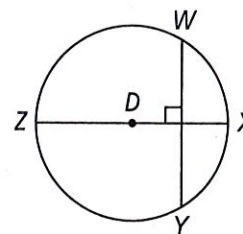
5.



6. In $\odot X$, \overline{AC} is a diameter and $\overline{ED} \cong \overline{EB}$. What can you conclude about \widehat{DC} and \widehat{CB} ? Explain.

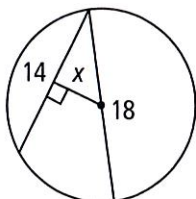


7. In $\odot D$, \overline{ZX} is the diameter of the circle and $\overline{ZX} \perp \overline{WY}$. What conclusions can you make? Justify your answer.

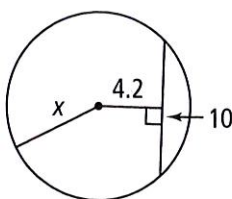


Find the value of x to the nearest tenth.

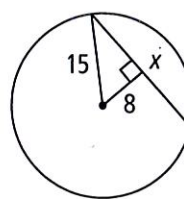
8.



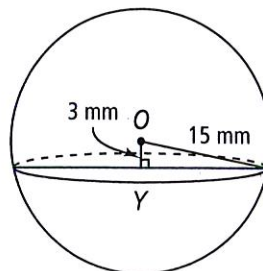
9.



10.



11. In the figure at the right, sphere O with radius 15 mm is intersected by a plane 3 mm from the center. To the nearest tenth, find the radius of the cross section $\odot Y$.

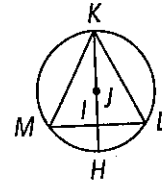


12-2 Practice (continued)

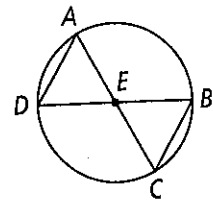
Chords and Arcs

Form G

12. Given: $\odot J$ with diameter \overline{HK} ; $\widehat{KL} \cong \widehat{LM} \cong \widehat{MK}$
 Prove: $\triangle KIL \cong \triangle KIM$

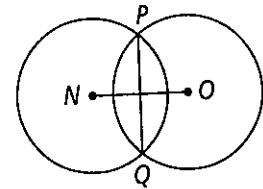


13. Given: \overline{AC} and \overline{DB} are diameters of $\odot E$.
 Prove: $\triangle EAD \cong \triangle ECB$



- $\odot N$ and $\odot O$ are congruent. \overline{PQ} is a chord of both circles.

14. If $NO = 12$ in. and $\overline{PQ} = 8$ in., how long is the radius to the nearest tenth of an inch?



15. If $NO = 30$ mm and radius = 16 mm, how long is \overline{PQ} to the nearest tenth of a millimeter?

16. If radius = 12 m and $\overline{PQ} = 9$ m, how long is \overline{NO} to the nearest tenth?

17. **Draw a Diagram** A student draws $\odot X$ with a diameter of 12 cm. Inside the circle she inscribes equilateral $\triangle ABC$ so that \overline{AB} , \overline{BC} , and \overline{CA} are all chords of the circle. The diameter of $\odot X$ bisects \overline{AB} . The section of the diameter from the center of the circle to where it bisects \overline{AB} is 3 cm. To the nearest whole number, what is the perimeter of the equilateral triangle inscribed in $\odot X$?

18. Two concentric circles have radii of 6 mm and 12 mm. A segment tangent to the smaller circle is a chord of the larger circle. What is the length of the segment to the nearest tenth.